40/583877 AP3 Rec'd PCT/PTO 21 JUN 2007

SEQUENCE LISTING

<110> Glaxo Group Limited
 Ellis, Jonathan H
 Eon-Duval, Alexandre
 Grundy, Robert I
 Hussain, Farhana
 McAdam, Ruth

1101100111, 110011

Plumpton, Christopher

Prinjha, Rabinder K

Wison, Paul A

<120> Immunoglobulins

<130> GCN/PB60608

<140> PCT/GB2004/005325

<141> 2004-12-20

<150> GB 0329684.5

<151> 2003-12-22

<150> GB 0329711.6

<151> 2003-12-22

<160> 97

<170> PatentIn version 3.1

```
<210> 1
<211> 16
<212> PRT
<213> Mus musculus
<400> 1
Arg Ser Ser Lys Ser Leu Leu Tyr Lys Asp Gly Lys Thr Tyr Leu Asn
<210> 2
<211> 7
<212> PRT
<213> Mus musculus
<400> 2
Leu Met Ser Thr Arg Ala Ser
<210> 3
<211> 9
<212> PRT
<213> Mus musculus
<400> 3
Gln Gln Leu Val Glu Tyr Pro Leu Thr
<210> 4
<211> 5
<212> PRT
```

```
<213> Mus musculus
<400> 4
Ser Tyr Trp Met His
<210> 5
<211> 17
<212> PRT
<213> Mus musculus
<400> 5
Asn Ile Asn Pro Ser Asn Gly Gly Thr Asn Tyr Asn Glu Lys Phe Lys
Ser
<210> 6
<211> 4
<212> PRT
<213> Mus musculus
<400> 6
Gly Gln Gly Tyr
<210> 7
<211> 16
<212> PRT
<213> Mus musculus
```

<400> 7

```
Arg Ser Ser Gln Ser Leu Val His Ser Asn Gly Asn Thr Tyr Leu His
<210> 8
<211> 7
<212> PRT
<213> Mus musculus
<400> 8
Lys Val Ser Asn Arg Phe Ser
<210> 9
<211> 9
<212> PRT
<213> Mus musculus
<400> 9
Ser Gln Ser Thr His Val Pro Leu Thr
<210> 10
<211> 7
<212> PRT
<213> Mus musculus
<400> 10
Phe Ser Cys Tyr Ala Met Ser
<210> 11
<211> 17
```

<212> PRT

<213> Mus musculus

<400> 11

Ser Ile Ser Asp Gly Gly Ser Tyr Thr Tyr Tyr Pro Asp Asn Val Lys 1 $$ 5 $$ 10 $$ 15

Gly

<210> 12

<211> 6

<212> PRT

<213> Mus musculus

<400> 12

Glu Leu Leu Phe Asp Tyr

<210> 13

<211> 16

<212> PRT

<213> Mus musculus

<400> 13

<210> 14

<211> 7

<212> PRT

<213> Mus musculus

```
<400> 14
Arg Met Ser Asn Leu Ala Ser
<210> 15
<211> 9
<212> PRT
<213> Mus musculus
<400> 15
Met Gln His Leu Glu Tyr Pro Leu Thr
<210> 16
<211> 5
<212> PRT
<213> Mus musculus
<400> 16
Ser Tyr Trp Met Asn
<210> 17
<211> 17
<212> PRT
<213> Mus musculus
<400> 17
Gln Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe Lys
```

Gly

```
<211> 4
<212> PRT
<213> Mus musculus
<400> 18
Arg Phe Asp Tyr
<210> 19
<211> 48
<212> DNA
<213> Mus musculus
<400> 19
aggtctagta agagtctcct atataaggat gggaagacat acttgaat
                                                                    48
<210> 20
<211> 21
<212> DNA
<213> Mus musculus
<400> 20
                                                                    21
ttgatgtcca cccgtgcatc a
<210> 21
<211> 27
<212> DNA
<213> Mus musculus
```

<400> caacaa	21 cttg	tagagtatcc	gctcacg				27
<210>	22						
<211>	15						
<212>	DNA						
<213>	Mus	musculus					
<400>		tgcac					15
agocao	-994	cycac					
<210>	23						
<211>	51						
<212>	DNA						
<213>	Mus	musculus					
<400> aatatta	23 aatc	ctagcaatgg	tggtactaac	tacaatgaga	agttcaagag	С	51
<210>	24						
<211>	12						
<212>	DNA						
<213>	Mus	musculus					
<400> ggacagg	24 ggct	ac					12
<210>	25						
<211>	48						
<212>	DNA	_					
<213>	Mus	musculus					
<400>	25						

agatet	agte	agageettgt	acacagtaat	ggaaacacct	atttacat	48
<210>	26					
<211>	21					
<212>	DNA					
<213>	Mus	musculus				
<400>		accgattttc	+			21
aaagcc	ccca	accyattic				21
<210>	27					
<211>	27					
<212>	DNA					
<213>	Mus	musculus				
<400>		cacatgttcc	actcaca			27
coodage	-9 UU		9000009			_,
<210>	28					
<211>	21			•		
<212>	DNA					
<213>	Mus	musculus				
<400>	28		`•			
		atgccatgtc	t			21
<210>	29					
<211>	51					
<212>	DNA					
		musculus				
		•				
<400>	29					

tecatt	agtg atggtggtag	ttacacctac	tatccagaca	atgtaaaggg C	5.	L
<210>	30					
<211>	18					
<212>	DNA					
<213>	Mus musculus					
<400>	30 cttt ttgactac				18	R
gaacta	ceee etgaceae				1	•
<210>	31					
<211>	48					
<212>	DNA					
<213>	Mus musculus					
<400>	31 agta agagteteet	gcatagtaat	ggcaacactt	acttgtat	48	8
33				_		
<210>	32					
<211>	21					
<212>	DNA					
<213>	Mus musculus					
<400>	32 tcca accttgcctc	a			21	1
<210>	33					
<211>	27					
<212>						
<213>	Mus musculus					
<400>	33 cate tagaatatee	gctcacg			23	7

<210>	34						
<211>	15						
<212>	DNA						
<213>	Mus	musculus					
<400> agctact	34 cgga	tgaac					15
J		-					
<210>	35						
<211>	51						
<212>	DNA						
<213>	Mus	musculus					
<400>	35	ctagagatag	tgatactaac	tacaacggaa	agttcaaggg	C	51
cagacc	Jucc	ccggagacgg	cgacaccaac	cacaacggaa	ageceaaggg	C	J 1
<210>	36						
<211>	12						
<212>	DNA						
<213>	Mus	musculus					
<400>	36	at					12
ogooog	,						
<210>	37						
<211>	113						
<212>	PRT						
<213>	Mus	musculus					
<400>	37						

Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Lys Pro Gly Ala

Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr 20 25 30

Trp Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu Glu Trp Ile $35 \hspace{1.5cm} 40 \hspace{1.5cm} 45$

Gly Asn Ile Asn Pro Ser Asn Gly Gly Thr Asn Tyr Asn Glu Lys Phe 50 55 60

Lys Ser Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Tyr Cys
85 90 95

Glu Leu Gly Gln Gly Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser 100 105 110

Ser

<210> 38

<211> 115

<212> PRT

<213> Mus musculus

<400> 38

Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys Pro Gly Gly 1 5 10 15

Ser Leu Lys Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe Ser Cys Tyr 20 25 30

Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu Glu Trp Val 35 40 45

Ala Ser Ile Ser Asp Gly Gly Ser Tyr Thr Tyr Tyr Pro Asp Asn Val 50 60

Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn Asn Leu Tyr 65 70 75 80

Leu Gln Met Ser His Leu Lys Ser Glu Asp Thr Ala Met Tyr Tyr Cys 85 90 95

Ala Lys Glu Leu Leu Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr 100 105 110

Val Ser Ser 115

<210> 39

<211> 113

<212> PRT

<213> Mus musculus

<400> 39

Gln Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ala Phe Ser Ser Tyr 20 25 30

Trp Met Asn Trp Val Lys Gln Arg Pro Gly Lys Gly Leu Glu Trp Ile 35 40 45

Gly Gln Ile Tyr Pro Gly Asp Gly Asp Thr Asn Tyr Asn Gly Lys Phe 50 60

Lys Gly Lys Ala Thr Leu Thr Ala Asp Lys Ser Ser Ser Thr Ala Tyr 65 70 75 80

Met Gln Leu Ser Ser Leu Thr Ser Glu Asp Ser Ala Val Tyr Phe Cys 85 90 95

Ala Val Arg Phe Asp Tyr Trp Gly Gln Gly Thr Thr Leu Thr Val Ser 100 105 110

Ser

<210> 40

<211> 112

<212> PRT

<213> Mus musculus

<400> 40

Asp Ile Val Ile Thr Gln Asp Glu Leu Ser Asn Pro Val Thr Ser Gly 1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys 20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Ser 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Glu Ile 65 70 75, 80

Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu 85 90 95

Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys 100 105 110

<210> 41

<211> 112

<212> PRT

<213> Mus musculus

<400> 41

Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Pro Val Ser Leu Gly
1 5 10 15

Asp Gln Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser Leu Val His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu His Trp Tyr Leu Gln Lys Pro Gly Gln Ser 35 40 45

Pro Lys Leu Leu Ile Tyr Lys Val Ser Asn Arg Phe Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Phe Cys Ser Gln Ser 85 90 95

Thr His Val Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu Glu Leu Lys
100 105 110

<210> 42

<211> 112

<212> PRT

<213> Mus musculus

<400> 42

Asp Ile Val Met Thr Gln Ala Ala Pro Ser Val Pro Val Thr Pro Gly
1 5 10 15

Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu His Ser 20 25 30

Asn Gly Asn Thr Tyr Leu Tyr Trp Phe Leu Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Arg Met Ser Asn Leu Ala Ser Gly Val Pro 50 60

Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Ala Phe Thr Leu Arg Ile

Ser Arg V	al Glu Ala G 85	lu Asp Val	Gly Val Tyr 90	Tyr Cys Met	Gln His 95	
Leu Glu T	yr Pro Leu T 100	-	Ala Gly Thr 105	Lys Leu Glu	_	
<210> 43						
<211> 33	9					
<212> DN	A					
<213> Mu	s musculus					
<400> 43						
caggtccaa	c tgcagcagcc	tgggactgaa	ctggtgaagc	ctggggcttc	agtgaagctg	60
tcctgcaag	g cttctggcta	caccttcacc	agctactgga	tgcactgggt	gaagcagagg	120
cctggacaa	g gccttgagtg	gattggaaat	attaatccta	gcaatggtgg	tactaactac	180
aatgagaag	t tcaagagcaa	ggccacactg	actgtagaca	aatcctccag	cacagcctac	240
atgcagctca	a gcagcctgac	atctgaggac	tctgcggtct	attattgtga	actgggacag	300
ggctactgg	g gccaaggcac	cactctcaca	gtctcctca			339
<210> 44						
<211> 34	5					
<212> DN2	A					
<213> Mus	s musculus					
<400> 44	c tggtggagtc	tgggggaggc	ttagtgaagc	ctggagggtc	cctgaaactc	60
			tgctatgcca			120
			attagtgatg			180
						240
			tccagagaca			
ctycaaatga	ı yecatetgaa	gicigaggac	acagccatgt	actactgtgc	aaayyaacta	300

ctttttgact actggggcca aggcaccact ctcacagtct cctca

<210> 45 <211> 339 <212> DNA <213> Mus musculus

<400> 45
caggttcagc tgcagcagtc tggggctgag ctggtgaagc ctggggcctc agtgaagatt 60
tcctgcaaag cttctggcta cgcattcagt agctactgga tgaactgggt gaagcagagg 120
cctggaaagg gtcttgagtg gattggacag atttatcctg gagatggtga tactaactac 180
aacggaaagt tcaagggcaa ggccacactg actgcagaca aatcctccag cacagcctac 240
atgcagctca gcagcctgac ctctgaggac tctgcggtct atttctgtgc agtacgcttt 300
gactattggg gccaaggcac cactctcaca gtctcctca

<210> 46 <211> 336 <212> DNA

<213> Mus musculus

<400> 46
gatattgtga taacccagga tgaactctcc aatcctgtca cttctggaga atcagtttcc 60
atctcctgca ggtctagtaa gagtctccta tataaggatg ggaagacata cttgaattgg 120
tttctgcaga gaccaggaca atctcctcag ctcctgatct atttgatgtc cacccgtgca 180
tcaggagtct cagaccggtt tagtggcagt gggtcaggaa cagatttcac cctggaaatc 240
agtagagtga aggctgagga tgtgggtgtg tattactgtc aacaacttgt agagtatccg 300
ctcacgttcg gtgctggac caagctggag ctgaaa 336

<210> 47 <211> 336 <212> DNA

<213> Mus musculus

	47						60
gatgttg	ıtga	tgacccaaac	tccactctcc	ctgcctgtca	gtcttggaga	tcaagcctcc	60
atctctt	gca	gatctagtca	gagccttgta	cacagtaatg	gaaacaccta	tttacattgg	120
tacctgo	aga	agccaggcca	gtctccaaag	ctcctgatct	acaaagtttc	caaccgattt	180
tctgggg	ıtcc	cagacaggtt	cagtggcagt	ggatcaggga	cagatttcac	actcaagatc	240
agcagag	ıtgg	aggctgagga	tctgggagtt	tatttctgct	ctcagagtac	acatgttccg	300
ctcacgt	tcg	gtgctgggac	caagctggag	ctgaaa			336
<210>	48						
<211>	336						
<212>	DNA						
<213>	Mus	musculus					
<400>	48						
gatattg	tga	tgactcaggc	tgcaccctct	gtacctgtca	ctcctggaga	gtcagtatcc	60
atctcct	gca	ggtctagtaa	gagtctcctg	catagtaatg	gcaacactta	cttgtattgg	120
ttcctgc	aga	ggccaggcca	gtctcctcag	ctcctgatat	atcggatgtc	caaccttgcc	180
tcaggag	ıtcc	cagacaggtt	cagtggcagt	gggtcaggaa	ctgctttcac	actgagaatc	240
agtagag	ıtgg	aggctgagga	tgtgggtgtt	tattactgta	tgcaacatct	agaatatccg	300
ctcacgt	tcg	gtgctgggac	caagctggag	ctgaaa			336
.01.0	40						
<210>	49						
<211>	1407	7					
<212>	DNA						
<213>	Mus	musculus					
<400>	49						
aagcttg	ıcca	ccatgggatg	gagctgtatc	atcctcttt	tggtagcagc	agctacaggt	60
atagaat		aggtggaagt	aaaaaaaaa	aaaaataaaa	taataaaacc	tagaacttca	120

gtgaagctgt cctgcaaggc	ttctggctac	accttcacca	gctactggat	gcactgggtg	180
aagcagaggc ctggacaagg	ccttgagtgg	attggaaata	ttaatcctag	caatggtggt	240
actaactaca atgagaagtt	caagagcaag	gccacactga	ctgtagacaa	atcctccagc	300
acagectaca tgeageteag	cagcctgaca	tctgaggact	ctgcggtcta	ttattgtgaa	360
ctgggacagg gctactgggg	ccaaggcaca	ctagtcaccg	tctcctcagc	caaaacaaca	420
gccccatcgg tctatccact	ggcccctgtg	tgtggagata	caactggctc	ctcggtgact	480
ctaggatgcc tggtcaaggg	ttatttccct	gagccagtga	ccttgacctg	gaactctgga	540
tecetgteca gtggtgtgca	caccttccca	gctgtcctgc	agtctgacct	ctacaccctc	600
agcagctcag tgactgtaac	ctcgagcacc	tggcccagcc	agtccatcac	ctgcaatgtg	660
gcccacccgg caagcagcac	caaggtggac	aagaaaattg	agcccagagg	gcccacaatc	720
aagccctgtc ctccatgcaa	atgcccagca	cctaacctcc	tgggtggccc	atccgtcttc	780
atcttccctc caaagatcaa	ggatgtactc	atgatctccc	tgagccccat	agtcacatgt	840
gtggtggtgg atgtgagcga	ggatgaccca	gatgtccaga	tcagctggtt	tgtgaacaac	900
gtggaagtac acacagctca	gacacaaacc	catagagagg	attacaacag	tactctccgg	960
gtggtcagtg ccctccccat	ccagcaccag	gactggatga	gtggcaagga	gttcaaatgc	1020
aaggtcaaca acaaagacct	cccagcgccc	atcgagagaa	ccatctcaaa	acccaaaggg	1080
tcagtaagag ctccacaggt	atatgtcttg	cctccaccag	aagaagagat	gactaagaaa	1140
caggtcactc tgacctgcat	ggtcacagac	ttcatgcctg	aagacattta	cgtggagtgg	1200
accaacaacg ggaaaacaga	gctaaactac	aagaacactg	aaccagtcct	ggactctgat	1260
ggttcttact tcatgtacag	caagctgaga	gtggaaaaga	agaactgggt	ggaaagaaat	1320
agctactcct gttcagtggt	ccacgagggt	ctgcacaatc	accacacgac	taagagcttc	1380
teceggaete egggtaaatg	agaattc				1407

<211> 738

<212> DNA

<213> Mus musculus

<400> 50

aagcttgcca	ccatgaggtg	ctctcttcag	tttctggggg	tgcttatgtt	ctggatctct	60
ggagtcagtg	gggatattgt	gataacccag	gatgaactct	ccaatcctgt	cacttctgga	120
gaatcagttt	ccatctcctg	caggtctagt	aagagtctcc	tatataagga	tgggaagaca	180
tacttgaatt	ggtttctgca	gagaccagga	caatctcctc	agctcctgat	ctatttgatg	240
tccacccgtg	catcaggagt	ctcagaccgg	tttagtggca	gtgggtcagg	aacagatttc	300
accctggaaa	tcagtagagt	gaaggctgag	gatgtgggtg	tgtattactg	tcaacaactt	360
gtagagtatc	cgctcacgtt	cggtgctggg	accaagctgg	agctgaaacg	tacggatgct	420
gcaccgactg	tatccatctt	cccaccatcc	agtgagcagt	taacatctgg	aggtgcctca	480
gtcgtgtgct	tcttgaacaa	cttctacccc	aaagacatca	atgtcaagtg	gaagattgat	540
ggcagtgaac	gacaaaatgg	cgtcctgaac	agttggactg	atcaggacag	caaagacagc	600
acctacagca	tgagcagcac	cctcacgttg	accaaggacg	agtatgaacg	acataacagc	660
tatacctgtg	aggccactca	caagacatca	acttcaccca	ttgtcaagag	cttcaacagg	720
aatgagtgtt	aagaattc					738

<211> 37

<212> DNA

<213> Artificial sequence

<220>

<223> Murine VH leader sequence forward primer

<400> 51

actagtcgac atgaaatgca gctgggtcat sttcttc

<210> 52

<211> 36

<212> DNA

<213> Artificial sequence

<220>

37

<223>	Murine VH leader sequence forward primer	
<400> actagt	52 cgac atgggatgga gctrtatcat sytctt	36
<210>	53	
<211>	37	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400> actagt	53 cgac atgaagwtgt ggttaaactg ggttttt	37
<210>	54	
<211>	35	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400> actagt	54 cgac atgractttg ggytcagctt grttt	35
<210>	55	
<211>	40	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400>	55	

actagt	cgac atggactcca ggctcaattt agttttcctt	40
<210>	56	
<211>	37	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400>		
actagt	cgac atggctgtcy trgsgctrct cttctgc	37
<210>	57	
<211>	36	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400> actagt	57 .cgac atggratgga gckggrtctt tmtctt	36
<210>		
<211>		
<212>		
<213>	Artificial sequence	
4000÷		
<220>	Marriage TWY 1 and an arrange of the same 2	
	Murine VH leader sequence forward primer	
<400> actagt	58 cgac atgagagtgc tgattctttt gtg	33

<210>	59	
<211>	40	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400> actagt	59 tcgac atggmttggg tgtggamett getatteetg	40
<210>	60	
<211>	37	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400>	60 tcgac atgggcagac ttacattctc attcctg	37
		-
<210>	61	
<211>	38	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400> actagt	61 togac atggattttg ggctgatttt ttttattg	38
<210>	62	

<211>	37	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VH leader sequence forward primer	
<400>	62 cgac atgatggtgt taagtettet gtaeetg	37
actage	cyac acyacygige caageceee geacety	51
<210>	63	
<211>	40	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400>	63 cgac atgaagttgc ctgttaggct gttggtgctg	40
accago	and alguagety elyctagget gelggegety	4 0
<210>	64	
<211>	39	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400>	64 cgac atggagwcag acacactcct gytatgggt	39
accagn	ague ueggugweug ueueueeee greueggge	رر
<210>	65	
<211>	40	

<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagt	65 cgac atgagtgtgc tcactcaggt cctggcgttg	40
<210>	66	
<211>	43	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagte	66 cgac atgaggreec etgeteagwt tyttggmwte ttg	43
<210>	67	
<211>	40	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagto	67 cgac atggatttwc aggtgcagat twtcagcttc	40
<210>	68	
<211>	37	

<212> DNA

<220>			
<223>	Murine VL leader sequence for	ward primer	
<400> actagt	68 cgac atgaggtkcy ytgytsagyt yct	grgg	37
<210>	69		
<211>	41		
<212>	DNA		
<213>	Artificial sequence		
<220>			
<223>	Murine VL leader sequence for	ward primer	
<400> actagt	69 cgac atgggcwtca agatggagtc aca	kwyycwg g	41
<210>	70		
<211>	41		
<212>	DNA		
<213>	Artificial sequence		
<220>			
<223>	Murine VL leader sequence for	ward primer	
<400> actagt	70 cgac atgtggggay ctktttycmm ttt	ttcaatt g	41
<210>	71	,	
<211>	35		
<212>	DNA		
<213>	Artificial sequence		

<213> Artificial sequence

<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagt	71 cgac atggtrtccw casctcagtt ccttg	35
<210>	72	
<211>	37	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagt	72 cgac atgtatatat gtttgttgtc tatttct	37
<210>	73	
<211>	38	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagt	73 cgac atggaagccc cagctcagct tctcttcc	38
<210>	74	
<211>	37	
<212>	DNA	
<213>	Artificial sequence	

<220>		
<223>	Murine VL leader sequence forward primer	
<400> actagt	74 cgac atgaagtttc cttctcaact tctgctc	37
<210>	75	
<211>	28	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine gamma 1 constant region reverse primer	
<400> ggatcc	75 cggg ccagtggata gacagatg	28
<210>	76	
<211>	27	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine gamma 2b constant region reverse primer	
<400> ggatcc	76 cggg agtggataga ctgatgg	27
<210>	77	
<211>	27	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	Murine kappa constant region reverse primer	

<400> ggatco	77 ecggg tggatggtgg gaagatg	27
<210>	78	
<211>	52	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	2A10 VH forward primer	
<400> actcat	78 aagc ttgccaccat gggatggagc tgtatcatcc tctttttggt ag	52
<210>	79	
<211>	30	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	VH reverse primer	
	79	30
accaty	acta gtgtgccttg gccccagtag	30
<210>	80	
<211>	42	
<212>	DNA	
<213>	Artificial sequence	
<220>		
<223>	VL forward primer	
<400>	80 aago ttgccaccat gaggtgotot ottcagttto tg	42

<211> 29 <212> DNA <213> Artificial sequence <220> <223> VL reverse primer <400> 81 actatgcgta cgtttcagct ccagcttgg 29 <210> 82 <211> 19 <212> PRT <213> Artificial sequence <220> <223> CAMPATH-1H signal sequence <400> 82 Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly Val His Ser <210> 83 <211> 120 <212> PRT <213> Homo sapiens

<210> 81

<400> 83

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr 20 25 30

Tyr Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met 35 40 45

Gly Ile Ile Asn Pro Ser Gly Gly Ser Thr Ser Tyr Ala Gln Lys Phe 50 55 60

Gln Gly Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Ala Arg Gly Gln Trp Leu Val Ile Leu Asn Phe Asp Tyr Trp Gly Gln
100 105 110

Gly Thr Leu Val Thr Val Ser Ser 115 120

<210> 84

<211> 113

<212> PRT

<213> Artificial sequence

<220>

<223> Humanised VH construct H1

<400> 84

Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys Pro Gly Ala 1 5 10 15

Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe Thr Ser Tyr 20 25 30

Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Met

35 40 45

Gly Asn Ile Asn Pro Ser Asn Gly Gly Thr Asn Tyr Asn Glu Lys Phe 50 60

Lys Ser Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser Thr Val Tyr 65 70 75 80

Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys 85 90 95

Glu Leu Gly Gln Gly Tyr Trp Gly Gln Gly Thr Thr Val Thr Val Ser 100 105 110

Ser

<210> 85

<211> 112

<212> PRT

<213> Homo sapiens

<400> 85

Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly 1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Gly Leu Val Tyr Ser 20 25 30

Asp Gly Asp Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser 35 40 45

Pro Arg Arg Leu Ile Tyr Lys Val Ser Asn Arg Asp Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile
65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Met Gln Gly 85 90 95

Thr His Trp Pro Tyr Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys
100 105 110

<210> 86

<211> 112

<212> PRT

<213> Artificial sequence

<220>

<223> Humanised VL construct L11

<400> 86

Asp Ile Val Ile Thr Gln Ser Pro Leu Ser Leu Pro Val Thr Leu Gly 1 5 10 15

Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu Leu Tyr Lys
20 25 30

Asp Gly Lys Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro Gly Gln Ser 35 40 45

Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala Ser Gly Val Pro 50 55 60

Asp Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr Leu Lys Ile 65 70 75 80

Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr Cys Gln Gln Leu 85 90 95

Val Glu Tyr Pro Leu Thr Phe Gly Gln Gly Thr Lys Leu Glu Ile Lys 100 105 110

<210> 87

<211> 201

<212> PRT

<400> 87

Met Gln Glu Ser Leu Tyr Pro Ala Ala Gln Leu Cys Pro Ser Phe Glu 1 5 10 15

Glu Ser Glu Ala Thr Pro Ser Pro Val Leu Pro Asp Ile Val Met Glu 20 25 30

Ala Pro Leu Asn Ser Ala Val Pro Ser Ala Gly Ala Ser Val Ile Gln 35 40 45

Pro Ser Ser Pro Leu Glu Ala Ser Ser Val Asn Tyr Glu Ser Ile 50 55 60

Lys His Glu Pro Glu Asn Pro Pro Pro Tyr Glu Glu Ala Met Ser Val 65 70 75 80

Ser Leu Lys Lys Val Ser Gly Ile Lys Glu Glu Ile Lys Glu Pro Glu 85 90 95

Asn Ile Asn Ala Ala Leu Gln Glu Thr Glu Ala Pro Tyr Ile Ser Ile 100 105 110

Ala Cys Asp Leu Ile Lys Glu Thr Lys Leu Ser Ala Glu Pro Ala Pro
115 120 125

Asp Phe Ser Asp Tyr Ser Glu Met Ala Lys Val Glu Gln Pro Val Pro 130 135 140

Asp His Ser Glu Leu Val Glu Asp Ser Ser Pro Asp Ser Glu Pro Val 145 150 155 160

Asp Leu Phe Ser Asp Asp Ser Ile Pro Asp Val Pro Gln Lys Gln Asp 165 170 175

Glu Thr Val Met Leu Val Lys Glu Ser Leu Thr Glu Thr Ser Phe Glu 180 185 190

Ser Met Ile Glu Tyr Glu Asn Lys Glu 195 200

<211> 462

<212> PRT

<213> Artificial sequence

<220>

<223> anti-NOGO antibody heavy chain

<400> 88

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
20 25 30

Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser Gly Tyr Thr Phe 35 40 45

Thr Ser Tyr Trp Met His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu 50 55 60

Glu Trp Met Gly Asn Ile Asn Pro Ser Asn Gly Gly Thr Asn Tyr Asn 65 70 75 80

Glu Lys Phe Lys Ser Arg Val Thr Met Thr Arg Asp Thr Ser Thr Ser 85 90 95

Thr Val Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val
100 105 110

Tyr Tyr Cys Glu Leu Gly Gln Gly Tyr Trp Gly Gln Gly Thr Leu Val 115 120 125

Thr Val Ser Ser Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala 130 135 140

Pro Ser Ser Lys Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu 145 150 155 160

val	гÀг	ASP	Tyr	165	PIO	GIU	PIO	vai	170	Val	Sei	TIP	ASII	175	GIÀ
Ala	Leu	Thr	Ser 180	Gly	Val	His	Thr	Phe 185	Pro	Ala	Val	Leu	Gln 190	Ser	Ser
Gly	Leu	Туг 195	Ser	Leu	Ser	Ser	Val 200	Val	Thr	Val	Pro	Ser 205	Ser	Ser	Leu
Gly	Thr 210	Gln	Thr	Tyr	Ile	Cys 215	Asn	Val	Asn	His	Lys 220	Pro	Ser	Asn	Thr
Lys 225	Val	Asp	Lys	Lys	Val 230	Glu	Pro	Lys	Ser	Cys 235	Asp	Lys	Thr	His	Thr 240
Cys	Pro	Pro	Суѕ	Pro 245	Ala	Pro	Glu	Leu	Ala 250	Gly	Ala	Pro	Ser	Val 255	Phe
Leu	Phe	Pro	Pro 260	Lys	Pro	Lys	Asp	Thr 265	Leu	Met	Ile	Ser	Arg 270	Thr	Pro
Glu	Val	Thr 275	Суѕ	Val	Val	Val	Asp 280	Val	Ser	His	Glu	Asp 285	Pro	Glu	Val
Lys	Phe 290	Asn	Trp	Tyr	Val	Asp 295	Gly	Val	Glu	Val	His 300	Asn	Ala	Lys	Thr
Lys 305	Pro	Arg	Glu	Glu	Gln 310	Tyr	Asn	Ser	Thr	Туг 315	Arg	Val	Val	Ser	Val 320
Leu	Thr	Val	Leu	His 325	Gln	Asp	Trp	Leu	Asn 330	Gly	Lys	Glu	Tyr	Lys 335	Cys
Lys	Val	Ser	Asn 340	Lys	Ala	Leu	Pro	Ala 345	Pro	Ile	Glu	Lys	Thr 350	Ile	Ser
Lys	Ala	Lys 355	Gly	Gln	Pro	Arg	Glu 360	Pro	Gln	Val	Tyr	Thr 365	Leu	Pro	Pro
Ser	Arg 370	Asp	Glu	Leu	Thr	Lys 375	Asn	Gln	Val	Ser	Leu 380	Thr	Cys	Leu	Val
Laze	Gly	Phe	Tur	Dro	Sor	λen	Tlo	7 1 =	V2.1	Clu	m~~	C1	cor	λακ	C1

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp 405 410 415

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp 420 425 430

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His 435 440 445

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys 450 455 460

<210> 89

<211> 238

<212> PRT

<213> Artificial sequence

<220>

<223> anti-NOGO antibody light chain

<400> 89

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Thr Ala Thr Gly
1 5 10 15

Val His Ser Asp Ile Val Ile Thr Gln Ser Pro Leu Ser Leu Pro Val 20 25 30

Thr Leu Gly Gln Pro Ala Ser Ile Ser Cys Arg Ser Ser Lys Ser Leu 35 40 45

Leu Tyr Lys Asp Gly Lys Thr Tyr Leu Asn Trp Phe Gln Gln Arg Pro 50 55 60

Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala Ser 65 70 75 80

Gly Val Pro Asp Arg Phe Ser Gly Gly Gly Ser Gly Thr Asp Phe Thr 85 90 95

Leu	Lys	Ile	Ser 100	Arg	Val	Glu	Ala	Glu 105	Asp	Val	Gly	Val	Tyr 110	Tyr	Cys	
Gln	Gln	Leu 115	Val	Glu	Tyr	Pro	Leu 120	Thr	Phe	Gly	Gln	Gly 125	Thr	Lys	Leu	
Glu	Ile 130	Lys	Arg	Thr	Val	Ala 135	Ala	Pro	Ser	Val	Phe 140	Ile	Phe	Pro	Pro	
Ser 145	Asp	Glu	Gln	Leu	Lys 150	Ser	Gly	Thr	Ala	Ser 155	Val	Val	Cys	Leu	Leu 160	
Asn	Asn	Phe	Tyr	Pro 165	Arg	Glu	Ala	Lys	Val 170	Gln	Trp	Lys	Val	Asp 175	Asn	
Ala	Leu	Gln	Ser 180	Gly	Asn	Ser	Gln	Glu 185	Ser	Val	Thr	Glu	Gln 190	Asp	Ser	
Lys	Asp	Ser 195	Thr	Tyr	Ser	Leu	Ser 200	Ser	Thr	Leu	Thr	Leu 205	Ser	Lys	Ala	
Asp	Tyr 210	Glu	Lys	His	Lys	Val 215	Tyr	Ala	Cys	Glu	Val 220	Thr	His	Gln	Gly	
Leu 225	Ser	Ser	Pro	Val	Thr 230	Lys	Ser	Phe	Asn	Arg 235	Gly	Glu	Cys			
<210)> 9	90														
<211	.> 1	428														
<212	?> I	ONA														
<213	i> I	Artif	icia	al se	equen	ıce										
<220)>															
<223	;> I	Polyn	ucle	otic	le en	codi	ng S	EQ I	D NC	: 88	:					
<400 aago		0 nca g	rttac	tcag:	rc ac	acag	gacc	tca	ccat	ggg	atgg	agct	gt a	ıtcat	cctct 60)
tctt	ggtā	igc a	acag	ctac	a gg	tgtc	cact	ccc	aggt	gca	gctg	gtgc	ag t	ctgg	ggctg 120)

aggtgaagaa	gcctggggcc	tcagtgaagg	tttcctgcaa	ggcatctgga	tacaccttca	180
ccagctactg	gatgcactgg	gtgcgacagg	cccctggaca	agggcttgag	tggatgggaa	240
atattaatcc	tagcaatggt	ggtactaact	acaatgagaa	gttcaagagc	agagtcacca	300
tgaccaggga	cacgtccacg	agcacagtct	acatggagct	gagcagcctg	agatctgagg	360
acacggccgt	gtattactgt	gaactgggac	agggctactg	gggccaggga	acactagtca	420
cagtctcctc	agcctccacc	aagggcccat	cggtcttccc	cctggcaccc	tcctccaaga	480
gcacctctgg	gggcacagcg	gccctgggct	gcctggtcaa	ggactacttc	cccgaaccgg	540
tgacggtgtc	gtggaactca	ggcgccctga	ccagcggcgt	gcacaccttc	ccggctgtcc	600
tacagtcctc	aggactctac	tccctcagca	gcgtggtgac	cgtgccctcc	agcagcttgg	660
gcacccagac	ctacatctgc	aacgtgaatc	acaagcccag	caacaccaag	gtggacaaga	720
aagttgagcc	caaatcttgt	gacaaaactc	acacatgccc	accgtgccca	gcacctgaac	780
tcgcgggggc	accgtcagtc	ttcctcttcc	ccccaaaacc	caaggacacc	ctcatgatct	840
cccggacccc	tgaggtcaca	tgcgtggtgg	tggacgtgag	ccacgaagac	cctgaggtca	900
agttcaactg	gtacgtggac	ggcgtggagg	tgcataatgc	caagacaaag	ccgcgggagg	960
agcagtacaa	cagcacgtac	cgtgtggtca	gcgtcctcac	cgtcctgcac	caggactggc	1020
tgaatggcaa	ggagtacaag	tgcaaggtct	ccaacaaagc	cctcccagcc	cccatcgaga	1080
aaaccatctc	caaagccaaa	gggcagcccc	gagaaccaca	ggtgtacacc	ctgcccccat	1140
cccgggatga	gctgaccaag	aaccaggtca	gcctgacctg	cctggtcaaa	ggcttctatc	1200
ccagcgacat	cgccgtggag	tgggagagca	atgggcagcc	ggagaacaac	tacaagacca	1260
cgcctcccgt	gctggactcc	gacggctcct	tcttcctcta	cagcaagctc	accgtggaca	1320
agagcaggtg	gcagcagggg	aacgtcttct	catgctccgt	gatgcatgag	gctctgcaca	1380
accactacac	gcagaagagc	ctctccctgt	ctccgggtaa	atgaattc		1428

<211> 758

<212> DNA

<213> Artificial sequence

<220>

Polynucleotide encoding SEQ ID NO: 89 <223> <400> 91 aagctttaca gttactcagc acacaggacc tcaccatggg atggagctgt atcatcctct 60 tcttggtagc aacagctaca ggtgtccact ccgatattgt gataacccag tctccactct 120 ccctgcccgt cacccttgga cagccggcct ccatctcctg caggtctagt aagagtctcc 180 tatataagga tgggaagaca tacttgaatt ggtttcagca gaggccaggc caatctccac 240 agctcctaat ttatttgatg tccacccgtg catctggggt cccagacaga ttcagcggcg 300 gtgggtcagg cactgatttc acactgaaaa tcagcagggt ggaggctgag gatgttgggg 360 tttattactg ccaacaactt gtagagtatc cgctcacgtt tggccagggg accaagctgg 420 agatcaaacg tacggtggct gcaccatctg tcttcatctt cccgccatct gatgagcagt 480 tgaaatctgg aactgcctct gttgtgtgcc tgctgaataa cttctatccc agagaggcca 540 aagtacagtg gaaggtggac aacgccctcc aatcgggtaa ctcccaggag agtgtcacag 600 agcaggacag caaggacagc acctacagcc tcagcagcac cctgacgctg agcaaagcag 660 actacgagaa acacaaagtc tacgcctgcg aagtcaccca tcagggcctg agctcgcccg 720 tcacaaagag cttcaacagg ggagagtgtt aggaattc 758

<210> 92

<211> 462

<212> PRT

<213> Artificial sequence

<220>

<223> Heavy chain sequence for HcLc

<400> 92

Met Gly Trp Ser Cys Ile Ile Leu Phe Leu Val Ala Ala Ala Thr Gly 1 5 10 15

Val His Ser Gln Val Gln Leu Gln Gln Pro Gly Thr Glu Leu Val Lys
20 25 30

Pro Gly Ala Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Tyr Thr Phe 35 40 45

Thr	Ser 50	Tyr	Trp	Met	His	Trp 55	Val	Lys	Gln	Arg	Pro 60	Gly	Gln	Gly	Leu
Glu 65	Trp	Ile	Gly	Asn	Ile 70	Asn	Pro	Ser	Asn	Gly 75	Gly	Thr	Asn	Tyr	Asn 80
Glu	Lys	Phe	Lys	Ser 85	Lys	Ala	Thr	Leu	Thr 90	Val	Asp	Lys	Ser	Ser 95	Ser
Thr	Ala	Tyr	Met 100	Gln	Leu	Ser	Ser	Leu 105	Thr	Ser	Glu	Asp	Ser 110	Ala	Val
Tyr	Tyr	Cys 115	Glu	Leu	Gly	Gln	Gly 120	Tyr	Trp	Gly	Gln	Gly 125	Thr	Leu	Val
Thr	Val 130	Ser	Ser	Ala	Ser	Thr 135	Lys	Gly	Pro	Ser	Val 140	Phe	Pro	Leu	Ala
Pro 145	Ser	Ser	Lys	Ser	Thr 150	Ser	Gly	Gly	Thr	Ala 155	Ala	Leu	Gly	Cys	Leu 160
Val	Lys	Asp	Tyr	Phe 165	Pro	Glu	Pro	Val	Thr 170	Val	Ser	Trp	Asn	Ser 175	Gly
Ala	Leu	Thr	Ser 180	Gly	Val	His	Thr	Phe 185	Pro	Ala	Val	Leu	Gln 190	Ser	Ser
Gly	Leu	Туг 195	Ser	Leu	Ser	Ser	Val 200	Val	Thr	Val	Pro	Ser 205	Ser	Ser	Leu
Gly	Thr 210	Gln	Thr	Tyr	Ile	Cys 215	Asn	Val	Asn	His	Lys 220	Pro	Ser	Asn	Thr
Lys 225	Val	Asp	Lys	Lys	Val 230	Glu	Pro	Lys	Ser	Cys 235	Asp	Lys	Thr	His	Thr 240
Cys	Pro	Pro	Cys	Pro 245	Ala	Pro	Glu	Leu	Leu 250	Gly	Gly	Pro	Ser	Val 255	Phe
Leu	Phe	Pro	Pro 260	Lys	Pro	Lys	Asp	Thr 265	Leu	Met	Ile	Ser	Arg 270	Thr	Pro

Glu Val Thr Cys Val Val Val Asp Val Ser His Glu Asp Pro Glu Val 275 280 285

Lys Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn Ala Lys Thr 290 295 300

Lys Pro Arg Glu Glu Gln Tyr Asn Ser Thr Tyr Arg Val Val Ser Val 305 310 315 320

Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys 325 330 335

Lys Val Ser Asn Lys Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser 340 345 350

Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro 355 360 365

Ser Arg Asp Glu Leu Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val 370 380

Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu Ser Asn Gly 385 390 395 400

Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp 405 410 415

Gly Ser Phe Phe Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp 420 425 430

Gln Gln Gly Asn Val Phe Ser Cys Ser Val Met His Glu Ala Leu His 435 440 445

Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys 450 455 460

<210> 93

<211> 1405

<212> DNA

<213> Artificial sequence

<220>

<223> Polynucleotide encoding SEQ ID NO: 92

<400> 93 aagcttgcca ccatgggatg gagctgtatc atcctctttt tggtagcagc agctacaggt 60 120 gtccactccc aggtccaact gcagcagcct gggactgaac tggtgaagcc tggggcttca gtgaagctgt cctgcaaggc ttctggctac accttcacca gctactggat gcactgggtg 180 240 aagcagaggc ctggacaagg ccttgagtgg attggaaata ttaatcctag caatggtggt 300 actaactaca atgagaagtt caagagcaag gccacactga ctgtagacaa atcctccagc acagcctaca tgcagctcag cagcctgaca tctgaggact ctgcggtcta ttattgtgaa 360 ctgggacagg gctactgggg ccaaggcaca ctagtcacag tctcctcagc ctccaccaag 420 ggcccatcgg tcttccccct ggcaccctcc tccaagagca cctctggggg cacagcggcc 480 ctgggctgcc tggtcaagga ctacttcccc gaaccggtga cggtgtcgtg gaactcaggc 540 gccctgacca gcggcgtgca caccttcccg gctgtcctac agtcctcagg actctactcc 600 ctcagcagcg tggtgaccgt gccctccagc agcttgggca cccagaccta catctgcaac 660 720 gtgaatcaca agcccagcaa caccaaggtg gacaagaaag ttgagcccaa atcttgtgac aaaactcaca catgcccacc gtgcccagca cctgaactcc tggggggacc gtcagtcttc 780 ctcttccccc caaaacccaa ggacacctc atgatctccc ggacccctga ggtcacatgc 840 900 gtggtggtgg acgtgagcca cgaagaccct gaggtcaagt tcaactggta cgtggacggc gtggaggtgc ataatgccaa gacaaagccg cgggaggagc agtacaacag cacgtaccgt 960 1020 gtggtcagcg tcctcaccgt cctgcaccag gactggctga atggcaagga gtacaagtgc 1080 aaggtctcca acaaagccct cccagccccc atcgagaaaa ccatctccaa agccaaaggg cageceegag aaccacaggt gtacaceetg eccecateee gggatgaget gaccaagaae 1140 caggtcagcc tgacctgcct ggtcaaaggc ttctatccca gcgacatcgc cgtggagtgg 1200 gagagcaatg ggcagccgga gaacaactac aagaccacgc ctcccgtgct ggactccgac 1260 ggctccttct tcctctacag caagctcacc gtggacaaga gcaggtggca gcaggggaac 1320 gtcttctcat gctccgtgat gcatgaggct ctgcacaacc actacacgca gaagagcctc 1380 tccctgtctc cgggtaaatg aattc 1405

<211> 239

<212> PRT

<213> Artificial sequence

<220>

<223> Light chain sequence for HcLc

<400> 94

Met Arg Cys Ser Leu Gln Phe Leu Gly Val Leu Met Phe Trp Ile Ser 1 5 10 15

Gly Val Ser Gly Asp Ile Val Ile Thr Gln Asp Glu Leu Ser Asn Pro 20 25 30

Val Thr Ser Gly Glu Ser Val Ser Ile Ser Cys Arg Ser Ser Lys Ser 35 40 45

Leu Leu Tyr Lys Asp Gly Lys Thr Tyr Leu Asn Trp Phe Leu Gln Arg 50 55 60

Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Leu Met Ser Thr Arg Ala 65 70 75 80

Ser Gly Val Ser Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe 85 90 95

Thr Leu Glu Ile Ser Arg Val Lys Ala Glu Asp Val Gly Val Tyr Tyr 100 105 110

Cys Gln Gln Leu Val Glu Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys 115 120 125

Leu Glu Leu Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro 130 135 140

Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu 145 150 155 160

Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp

W.

165	170	175

Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp 180 185 190

Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys 195 200 205

Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln 210 215 220

Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys 225 230 235

<210> 95

<211> 738

<212> DNA

<213> Artificial sequence

<220>

<223> Polynucleotide encoding SEQ ID NO: 94

<400> 95

aagcttgcca ccatgaggtg ctctcttcag tttctggggg tgcttatgtt ctggatctct 60 ggagtcagtg gggatattgt gataacccag gatgaactct ccaatcctgt cacttctgga 120 gaatcagttt ccatctcctg caggtctagt aagagtctcc tatataagga tgggaagaca 180 tacttgaatt ggtttctgca gagaccagga caatctcctc agctcctgat ctatttgatg 240 tccacccgtg catcaggagt ctcagaccgg tttagtggca gtgggtcagg aacagatttc 300 accetggaaa teagtagagt gaaggetgag gatgtgggtg tgtattaetg teaacaaett 360 gtagagtatc cgctcacgtt cggtgctggg accaagctgg agctgaaacg tacggtggct 420 gcaccatctg tetteatett ecceccatet gatgageagt tgaaatetgg aactgeetet 480 gttgtgtgcc tgctgaataa cttctatccc agagaggcca aagtacagtg gaaggtggac 540 aacgccctcc aatcgggtaa ctcccaggag agtgtcacag agcaggacag caaggacagc 600 acctacagee teageageae eetgaegetg ageaaageag actaegagaa acacaaagte 660 720 tacgcctgcg aagtcaccca tcagggcctg agctcgcccg tcacaaagag cttcaacagg

```
738
```

```
ggagagtgtt aggaattc
```

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Motif

<400> 96

Tyr Glu Asn Pro 1

<210> 97

<211> 4

<212> PRT

<213> Artificial sequence

<220>

<223> Motif

<400> 97

Lys Lys Gln Asn